



Sanitary Surveys and Significant Deficiencies





Sanitary Surveys:

Definition of a Sanitary Survey:

On-site review of a public water system's:

- water source,
- facilities,
- equipment,
- operation and maintenance.

Sanitary Surveys assess a system's capability to supply safe drinking water.





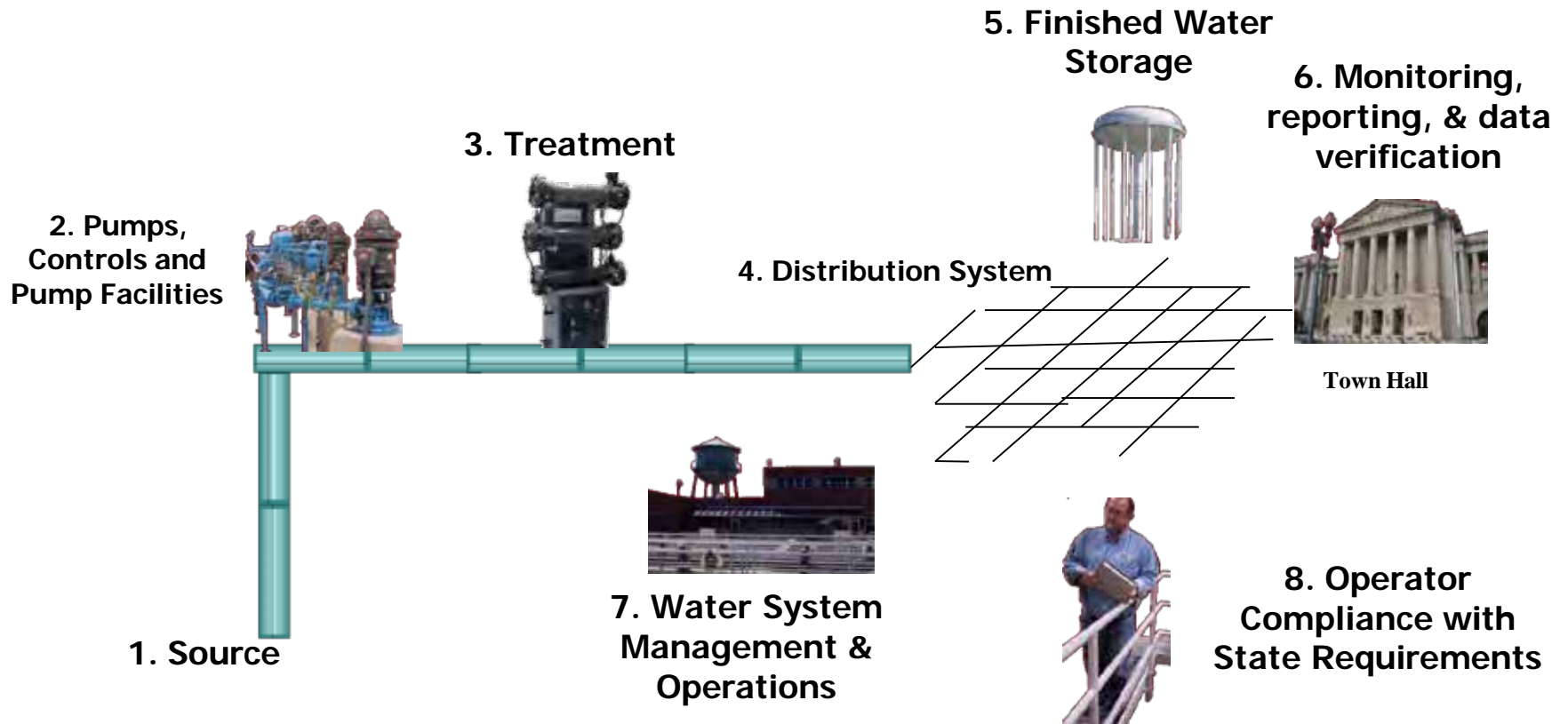
What is the frequency of Sanitary Surveys?

3 years for community water systems

5 years for non-community water systems



Sanitary surveys assess 8 elements:





Significant Deficiencies:

Include, but are not limited to, defects in the design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that EPA determines to **be causing or have the potential for causing the introduction of contamination into the water delivered to consumers.**

If any significant deficiencies are identified at your water system, you must respond to the EPA and you will be required to address them according to a schedule or you will receive a violation.



Examples of Source Significant Deficiencies



Conduit
not sealed

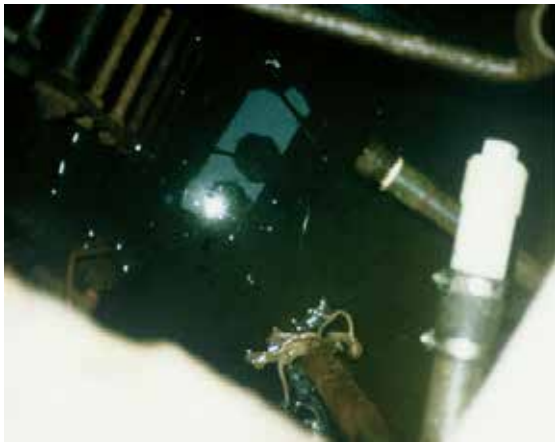
No wellhead
sanitary seal;
conduit & wires
not properly
sealed



Potential sources of
contamination
surrounding
wellhead



Examples of Source Significant Deficiencies



Dead snakes and mice floating in a spring box

No wellhead sanitary seal; conduit & wires not properly sealed



No wellhead sanitary seal; missing bolts = not properly sealed



Examples of Source Significant Deficiencies

Lid should have a flexible gasket for a positive seal

Lid is shoebox type but not locked



Near stream – it could have surface water influence



Examples of Source Significant Deficiencies

Obvious contamination



Cross connection with the venting/vacuum tied directly to the drain





Examples of Source Significant Deficiencies



Deteriorating concrete around the spring needs to be repaired

Dead mouse carcass on wellhead





Examples of Source Significant Deficiencies



Gaps

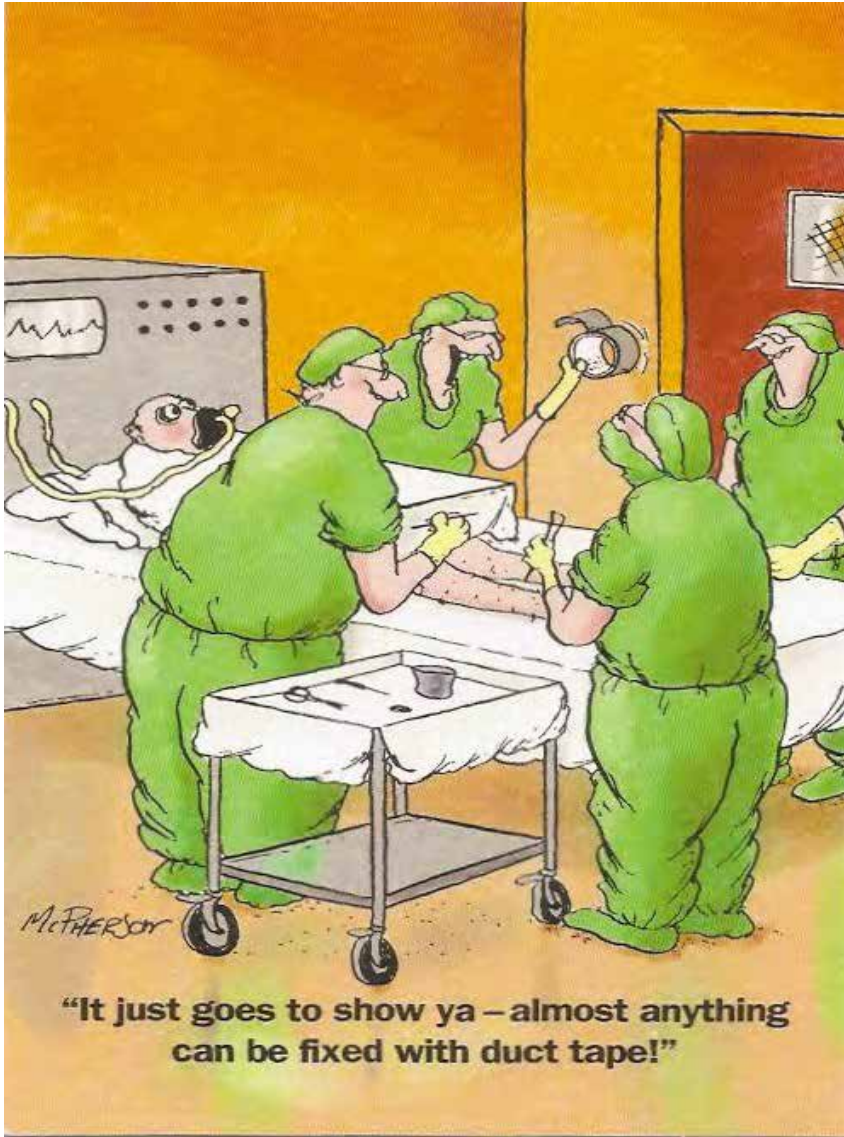
Gaps around pellet chlorinator allowed in irrigated water

Cross connection with the venting/vacuum tied directly to the drain





EPA Region 8 Sanitary Surveys and Significant Deficiencies





Examples of Source Significant Deficiencies



Conduit is not properly sealed.



Duct tape doesn't fix everything



Examples of Significant Deficiencies

Meter vault is flooded and cause of flooding is unknown



Mouse droppings in well house.



Examples of Source Significant Deficiencies



Lack of a sanitary seal



Wells in driveways need to be protected by bollards



Examples of Source Significant Deficiencies

Wells should be 18" above ground level or 12" above a concrete pad





Gravity Storage Tank Significant Deficiencies:



Overflow discharge does not have #24 mesh non-corrodible screen

Flapper valve on overflow does not seal properly





Storage Tank Significant Deficiencies:

**#24 mesh screen on air vent
not installed properly**



**Overflow not brought down
to 12 – 24" above the
ground surface**



Storage Tank Significant Deficiencies:



Un-repaired bullet hole in storage tank.

Hatch on buried tank does not have gasket.





Storage Tank Significant Deficiencies:



Hatch on buried tank (not water tight, not of correct type)

Hatch on buried tank is not 24" above ground, and does not have gasket (manhole-type cover).





Storage Tank Significant Deficiencies:



Overflow at ground level
(not 12" – 24" above); does
not have discharge structure
or splashpad

Finished water storage
tanks located below ground
in a horse corral.





Storage Tank Significant Deficiencies:



Frozen finished water storage tanks

Leaking finished water storage tanks



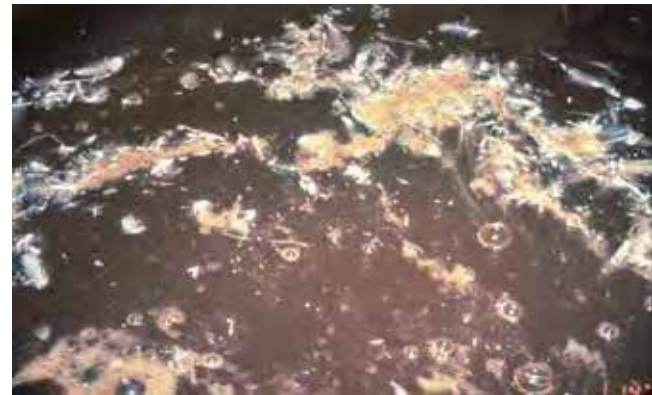


Examples of Significant Deficiencies

Storage tanks over 10 years old must be cleaned once every 10 years

Lack of Storage Tank Cleaning- Example: Gideon, MO

- Untreated groundwater source
- Taste and odor complaints caused municipality to conduct a comprehensive flushing program
- Salmonella had contaminated the largest municipal tank (1993)
- Nearly 600 of the 1104 residents become ill and seven people died in a nursing home



Photos and information courtesy of James A. Goodrich, Ph.D. with EPA/ORD



Examples of Significant Deficiencies

Storage tanks over 10 years old must be cleaned once every 10 years

"We cannot say with absolute certainty where the Salmonella came from because the actual contamination event was not directly observed, and probably occurred at least seven to 10 days before the outbreak was reported," Falco acknowledged. "But after weighing all the evidence, we believe that the most likely scenario is that contamination entered this in-ground storage tank."



2008 salmonella outbreak in Alamosa, CO



Examples of Management Significant Deficiencies

Lack of an emergency response plan (ERP)

These are for your use! Have all emergency response/electrician/plumber/etc. contact information in one location



Templates available at:

<https://www.epa.gov/region8-waterops/reporting-forms-and-instructions-reporting-forms#ERP>



How do YOU prepare for a sanitary survey?



Things to Prepare for Your Sanitary Survey:

General Facility Checks — prior to sanitary survey date

- Are all facilities accessible (e.g., keys to buildings available, gates accessible?)
- Are all facilities safe for inspection attendees (e.g., no exposed wiring, no uncovered pits)?
- Are all facilities operational (e.g., chemical feed pump working)?
- Are all facilities clean (e.g., chemicals/spare equipment stored properly, rodent free)?
- Are there any obvious problems with each potable water facility (e.g., holes in tanks; sanitary well seals not in place; and vents and overflows not screened with 24-mesh non-corrosive screen)?



Things to Prepare for Your Sanitary Survey:

General Paperwork Reviews — prior to sanitary survey date

- ➔ Review previous sanitary survey reports and be prepared to discuss findings and resolution of deficiencies and recommendations

Other items to have available:

- ➔ Water testing equipment (e.g., chlorine analyzer, sampling bottles)
- ➔ Paper and pencil for notes and a camera (optional)



Things to Prepare for Your Sanitary Survey:

Have These Records Available for Review During the Sanitary Survey

- Bacteriological Sample Siting Plan with Map
- Water quality analyses/laboratory records
- Monitoring Schedule for current year and cross-connection records
- Emergency Response Plan (Required for all PWSs)

Review the Tech Tips Provided Prior to Your Sanitary Survey

* Make any needed improvements before the date of your survey, especially to avoid having significant deficiencies identified!!!



What to do when you receive your sanitary survey report



What do I need to do when I receive my survey report?

- 1) Review the cover letter and sanitary survey report.
 - All of the significant deficiencies are noted in the cover letter and at the beginning of the sanitary survey report.
- 2) ALL significant deficiencies must be addressed.
- 3) Recommendations are solely that - recommendations.
 - But they should be addressed as a best practice!



EPA Region 8 Sanitary Surveys and Significant Deficiencies

To avoid receiving a violation if you have significant deficiencies (during initial response):

If your survey identifies significant deficiencies, in 2015 and thereafter, there will be an automatic corrective action date (date by when you must fix the deficiencies) of **6 months** from the day you receive the survey report.

- You **will** need to notify us once those improvements are completed
- You must request an extension from EPA **only** if you need more than 6 months to correct any of the deficiencies
- EPA will respond notifying you if your proposal has been accepted for deficiencies needing more than 6 months to correct



To avoid receiving a violation if you have significant deficiencies (when completing corrective actions):

- 1) Make the improvement to address the significant deficiency.
- 2) If an extension is needed, request one BEFORE the corrective action deadline.
- 3) You MUST notify EPA within 30 days after making the system improvements to address the significant deficiencies. Please also include the WY DEQ Engineer in that response email as well.
- 4) EPA will notify you that the significant deficiencies have been addressed for the items identified during that specific survey.



EPA Region 8 Sanitary Surveys and Significant Deficiencies

Call EPA or the Wyoming Association of Rural Water Systems (WARWS) if you need assistance with your water system; call the WY DEQ District Engineer prior to making improvements.

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